Jet Propulsion Laboratory **INTEROFFICE MEMORANDUM**

930-03-003-JV/ESB: lc

February 4, 2003

TO: J. A. Wackley

FROM: E. S. Burke

SUBJECT: Minutes for the DSS-25 and DSS-63 Downtime Readiness Review (DTRR) held on Wednesday January 29, 2003

DSS-25 and DSS-63 Downtime Readiness Review

The DSS-25 and DSS-63 Downtime Readiness Review (DTRR) was held on Wednesday, January 29, 2003. The purpose of the DTRR was to review and assess the readiness of the NSP task activities planned at DSS-25, and to review and assess the NSP and Servo Drive Upgrade tasks planned for implementation at DSS-63. Antenna downtime at DSS-25 and DSS-63 begins February 10, 2003.

Review Board

Gene Burke, Chairman	DSMS Operations
Bob McMahon	CSOC Engineering
Jesus Gimeno	MDSCC
Ken Kimball	DSMS Operation
Dave Allen	GDSCC Operations
Jose Valencia	Secretary

Attendees *(* = teleconference)*

Abrahamy, Ezra	Kurtik, Susan	Osman, Jeff
Alfouso, Raul*	Landon, Art	Perez, Pablo*
Allen, Dave	Marina, Miguel	Pham, Tuan
Burke, Gene	Martin, Angel*	Raphael, Angel*
Gimeno, Jesus*	McMahon, Bob	Rogers, Greg
Kimball, Ken	O'Dea, Andrew	Valencia, Jose
		Welch, Susan

DSS-25 AND DSS-63 Major Tasks and Activities Reviewed

1. Network Simplification Project
2. 70m Servo Drive Upgrade Task
3. NSP Demonstration Track

70m Servo Hydraulics Upgrade Task – S. Welch presented the task implementation material. The Servo Drive upgrades planned for DSS-63 are of the same design as those implemented at DSS-14 and 43. The task objective is to replace all obsolete hydraulic components and aged equipment that have become difficult to maintain. The downtime schedule for DSS-63 is based on the schedule used at DSS-14. Specialized training will be provided to the Operations group during the startup and engineering testing phases of the downtime.

E. Abrahamy (Safety Office) asked if the workarounds for the anomalies identified in anomaly reports (AR) 108264, 108271, and 108273 have been documented. Action Item (AI) #1 is assigned to Hal Ahlstrom to report on the workaround documentation for ARs 108264, 108271, and 108273.

Antenna group personnel from MDSCC were present at DSS-14 and DSS-43 for the Servo Drive upgrade implementation and received training. Hal Ahlstrom will provide additional training as required. Operations engineering will provide baseline and regression test procedures. The baseline tests are to be performed pre- and post-antenna downtime.

J. Osman stressed the importance of performing the baseline testing at DSS-63 and commented that if required, the start of the downtime could be delayed one day, so baseline testing can be performed. Jesus Gimeno commented that the required DSS-63 baseline testing would be performed during the next maintenance period, which is scheduled prior to the DSS-63 antenna downtime.

The status of Modkits was discussed:

- Modkit 101.102 on site since December 2002.
- Modkit 101.106 was scheduled to arrive at Spanish customs February 1, 2003.
- Modkit 101.304 is on site and has been successfully inventoried.
- Modkit 101.320 is on site. Madrid reported that 5 of the 288 items could not be located. The five missing items are small cables and could possibly have been packaged with other items. Madrid plans to conduct a second inventory to confirm if in fact these items are missing and report to Hal Ahlstrom for appropriate action, if necessary.

Network Simplification Project (NSP) – A. O'Dea presented the task implementation material. NSP downtime at DSS-25 and DSS-63 is scheduled to begin February 10, 2003, with NSP DSS-63 demonstration passes planned to begin on March 17, 2003. The NSP software version v3.2.1 is in use, and is in soak at DSS-24. The Uplink and Downlink software Modkits and Hardware Modkits have been delivered to MDSCC.

D. Allen said Paper Modkits are needed for the removal of Block-V receiver components at DSS-24, and for decommissioning one Telemetry Group Controller (TGC), which is to be used as a spare for formatter boards. He also requested that a Modkit be provided to disconnect the decommissioned TGC from the Local Area Network (LAN) to free LAN resources at GDSCC.

J. Gimeno inquired about JPL's plans for removing the Metric Data Assembly (MDA) from DSS-63 and DSS-65, and would like to have the necessary paper Modkits so his staff can begin work on this task. A. O'Dea responded he did not plan to remove the MDA equipment until after the NSP implementation task was completed. Ken Kimball commented that the task of removing the obsolete MDA equipment is not part of the DSS-63 Servo Drive/NSP downtime schedule and unless there is a

concern with floor space the task of removing the MDA would be worked later.
At DSS-63, the URA assembly was received with a damaged chassis, and has not yet been tested. Spares (boards) are available on-site to affect repairs if needed.

A. O'Dea asked if the System Performance Testing (SPT) could be performed in parallel with the Servo task acceptance testing at DSS-63. G. Rogers responded that barring any interference with the Servo task activities, conducting the SPTs would not be a problem.

The schedule at DSS-25 is such that it will allow for Acceptance Testing (AT) to be performed on NSP software version 3.2.x. G.

Advisories –

- K. Kimball will take an Action to provide Engineering with equipment removal dates for the Metric Data Assembly (MDA), so that the necessary Modkits can be produced and delivered.

- A. O'Dea will take an Action to provide three paper Modkits:
  1) to remove the TCT from the MDA
  2) to disconnect the decommissioned TGCs from the LAN
  3) to remove Block-V receiver components from DSS-24

Demonstration Tracks – A. Landon discussed the demonstration pass testing criteria. DSS-25 demonstration passes are planned to begin February 24. Candidates for testing at DSS-25 are: Voyager-1, M01O, MGS, Cassini, and Stardust.

DSS-63 demonstration passes are scheduled to begin April 6. Candidates for testing at DSS-63 are: Cassini, Voyager-1, M01O, MGS, Stardust Galileo, Ulysses, and Geotail.

A. Landon commented that he plans to begin DSS-63 demonstration tracks April 6, but the antenna availability date provided by H. Ahlstrom (April 14) is in conflict with his schedule, leaving only one week to perform demonstration tracks prior to the antenna returning to service on April 20. Madrid concurred that the DSS-63 Ops schedule has a number of demonstration tracks to begin April 6. Jeff Osman will take an Action to ascertain why the DSS-63 antenna downtime schedule has one-week for demonstration tracks instead of the requested two weeks, as scheduled at DSS-43.

Project Interface Testing (PITs) is planned for SIRTF, in view of the fact that the DSN will provide support in the NSP configuration.

MDSCC Status -- J. Gimeno commented that negotiations for time with the antenna group might be needed to complete the planned refurbishing of LNA equipment and power distribution work, before conducting SPT testing. His technical staff is ready to proceed and he does not foresee any task implementation problems.

Board Summary:

The Board reviewed each of the success criteria following the presentation and recommended

that DSS-25 and DSS-63 begin its downtime as planned. Comments provided by each of the Board members are listed.

Bob McMahon had no major concerns. All NSP task requisites appear to be in place, but he noted three items that need attention:

- Antenna baseline testing needs to be performed
- A lien on a set of missing hydraulic hoses needs to be cleared
- Paper Modkits need to be provided

Ken Kimball commented that overall, the task is in good shape. He does not have any major concerns and feels that the downtime for DSS-25 and DSS-63 should proceed as planned.

David Allen had no major concerns and recommended that the DSS-25 antenna downtime proceed as planned. He reiterated that paper Modkits are needed for the removal of Block-V receiver components from DSS-24, and the TGC formatter boards.

Jesus Gimeno had no major concerns with the task, but noted that the DSS-63 demonstration pass schedule has a discrepancy that needs to be cleared up. In addition, he would like to see paper Modkits for the removal of MDAs and TCG formatter boards at DSS-63 and 65.

Gene Burke commented on the lack of a schedule integrating the DSS-63 Servo Drive upgrade task activities with the NSP task activities. Action Item (AI) #2 is assigned to Hal Ahlstrom to provide a detailed DSS-63 integrated downtime task schedule. The processing of Modkits need attention to ensure the stations have all required components prior to the start of the downtime. In addition, he reiterated the concern raised by E. Abrahamy (Safety Office), regarding the documentation of workarounds for ARs 108264, 108271, and 108273.

Action Items (AI):

1. Action Item is assigned to Hal Ahlstrom to verify that workarounds for ARs 108264, 108271, and 108273 are documented.
2. Action Item is assigned to Hal Ahlstrom to provide a detailed DSS-63 integrated downtime task schedule.